



# **CITY OF BINGHAMTON SOLID WASTE MANAGEMENT**

**SUMMARY REPORT: 1990-2008  
UPDATED FEBRUARY 2009  
UPDATED JANUARY 2010  
UPDATED JANUARY 2011  
UPDATED FEBRUARY 2012  
UPDATED JANUARY 2013**

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## City of Binghamton Solid Waste Management Summary Report: 1990-2008

Over the past nineteen years there have been significant changes in solid waste regulations and practices throughout the United States and New York. The City of Binghamton, like all municipalities in the State, has been significantly affected by these changes. Although many communities have been slow in meeting the goals and standards set by the United States Environmental Protection Agency and New York State Department of Environmental Conservation, the City of Binghamton has been aggressive in meeting these challenges.

The U.S. EPA set a goal of reducing waste by 25% by 1993 through source reduction and recycling. The City of Binghamton has significantly exceeded this goal. By September of 1992 the city had reduced its landfilled waste stream by over 47%, and had a recycling rate of 37.2%. Table 1 displays the dramatic changes in waste stream components over the past nineteen years. In June and November of 2006, the City of Binghamton experienced some severe flooding which significantly contributed to our landfilled tonnage due to flood debris. In spite of these circumstances, Binghamton still had a very respectable recycling rate of 41.6% for 2006.

**Table 1**  
**CITY OF BINGHAMTON TONNAGES OF REFUSE MATERIALS 1990-2008**

<u>MATERIAL</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>
Garbage (Landfilled)	26,027	13,389	13,687	13,227	13,655	13,492	13,338	12,741	13,050	13,416	13,399	14,179	13,656	14,748	14,755	14,602	14,956	15,052	14,884
<b>Recycled</b>		<b>3,700</b>	<b>3,934</b>	<b>4,238</b>	<b>4,800</b>	<b>5,000</b>	<b>5,000</b>	<b>4,675</b>	<b>4,747</b>	<b>4,836</b>	<b>4,816</b>	<b>4,961</b>	<b>4,652</b>	<b>4,333</b>	<b>4,293</b>	<b>4,515</b>	<b>4,441</b>	<b>4,315</b>	<b>4,585</b>
<b>Yardwaste</b>		<b>4,000</b>	<b>4,000</b>	<b>4,200</b>	<b>4,400</b>	<b>4,400</b>	<b>5,000</b>	<b>5,000</b>	<b>5,200</b>	<b>6,136*</b>	<b>5,800*</b>	<b>5,950*</b>	<b>5,800*</b>						
<b>Metal</b>		<b>180</b>	<b>157</b>	<b>250</b>	<b>500</b>	<b>442</b>	<b>206</b>	<b>166</b>	<b>400</b>	<b>447</b>	<b>440</b>	<b>479</b>	<b>543</b>	<b>433</b>	<b>420</b>	<b>373</b>	<b>406</b>	<b>126</b>	<b>75</b>
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<b>TOTAL</b>	26,027	21,269	21,778	21,915	23,355	23,334	23,544	22,582	23,397	23,852	23,855	24,819	24,051	24,714	24,668	25,626	25,603	25,443	25,344
<b>Percent Recycled</b>	<b>0.0</b>	<b>37.0</b>	<b>37.2</b>	<b>39.6</b>	<b>41.5</b>	<b>42.2</b>	<b>43.3</b>	<b>43.6</b>	<b>44.2</b>	<b>44.0</b>	<b>43.8</b>	<b>42.9</b>	<b>43.2</b>	<b>40.3</b>	<b>40.2</b>	<b>43.0</b>	<b>41.6</b>	<b>40.8</b>	<b>41.2</b>

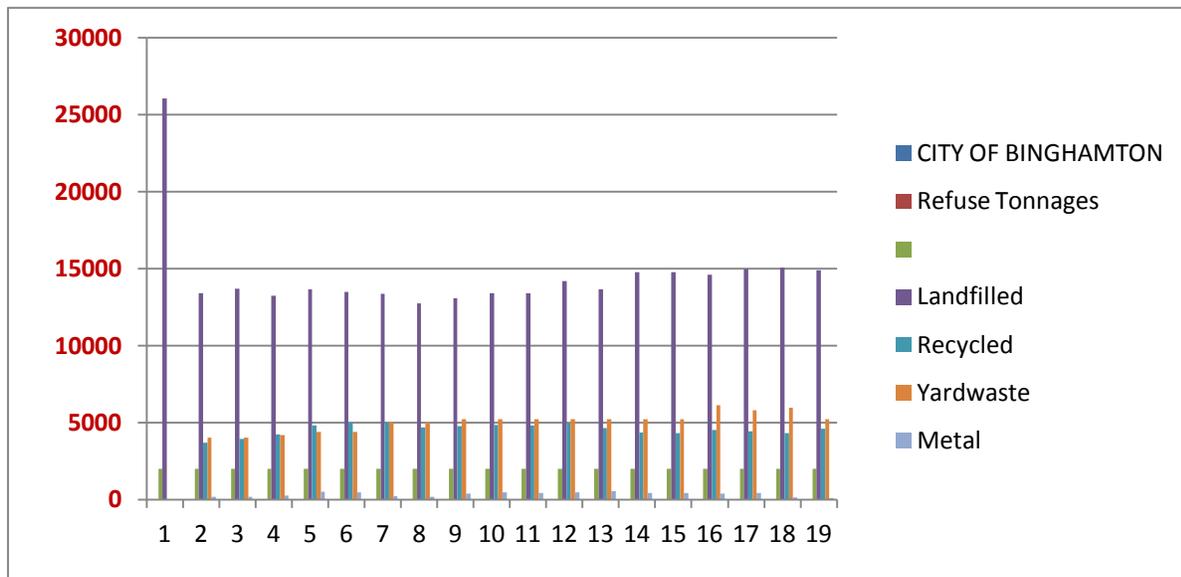
The following reflects the tipping fee that has been paid over the last six years to the Broome County Landfill:

2003	2004	2005	2006	2007	2008
\$591,816.03	\$590,216.40	\$585,476.95	\$601,017.50	\$572,566.24	\$595,358.40

The City has accomplished a successful solid waste program through an aggressive recycling program, and a bag "user fee" program. Prior to 1991 the City collected all waste twice per week, and landfilled all waste stream components. At this time the tipping fee, a mere \$12.00/ton, was divided among the City residents via a tipping fee line on the property tax bill. However, with the 300% increase in tipping fee cost in 1990, the City needed a more equitable way to distribute the cost of garbage disposal.

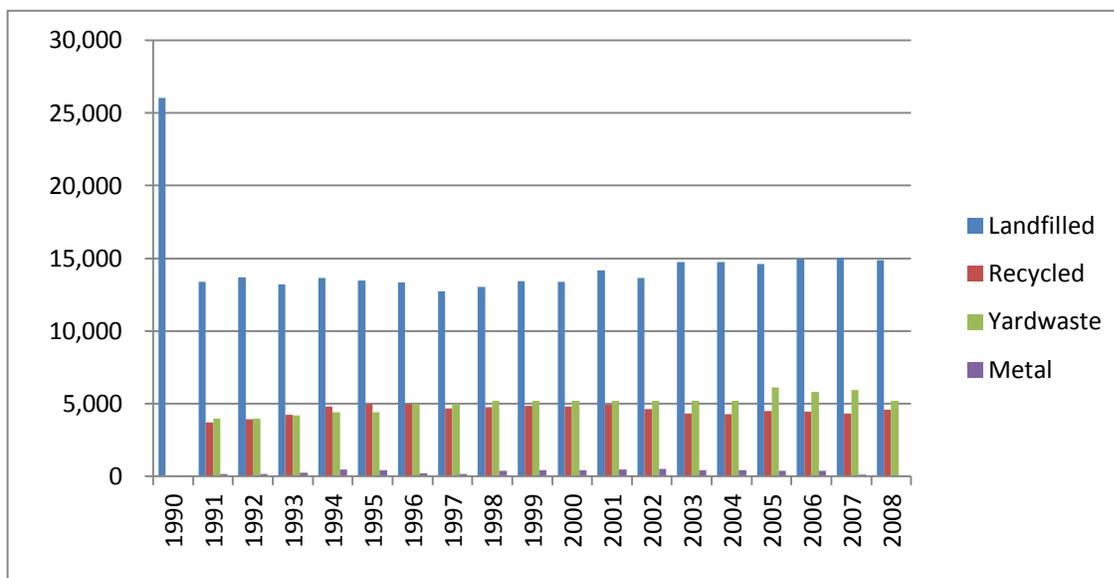
The bag program provided this mechanism, allowing citizens to only pay for what they produce. This program not only spreads the cost more equitably, it also provides an incentive for recycling. The combination of the bag and recycling programs has produced a dramatic decrease in the waste stream. The average overall yearly tonnage has decreased by nearly 48%, with 42% of the remaining materials recycled. This has led to dramatic savings in tipping fee costs. The City has averaged just under \$590,000 .00 over the past six years down from the all-time high of \$910,000.00 (1990). The tipping fee chart at the top of this page illustrates these figures.

During this time period, as each segment of the report outlines, the Department of Public Works Administration has taken an aggressive view on dealing with the changing waste scenario.



The Department has managed to maintain services, while cutting personnel by 25%. We have gone from a community that landfills all waste, to a community that is a respected leader among its peers. Each year the City provides information to numerous communities on the success of our program. Plus, according to the New York State Department of Environmental Conservation, the City stands in the top 20% of communities similar in size throughout the State.

Although these accomplishments are significant, there is still a great deal of room for improvement. The need to continue to strategically plan for the future is self-evident, and several areas need to be addressed. These areas are highlighted in the future planning section of this report.



### 1990

1990 proved to be the year of administrative research and decision making which would shape the sanitation and recycling programs' future. First, on January 2, 1990, the tipping fee at the Broome County landfill rose to \$35.00/ton. Second, the City continued extensive research into program alternatives that would provide a more equitable system of distributing costs, as well as begin a strong recycling effort.

Initially, DPW representatives visited the following communities to review their sanitation and recycling programs; Buffalo, Toronto, Ithaca, Syracuse, and Utica. They also spent countless hours reviewing current survey and research data pertaining to program areas that could be affected in the future. The DPW, Comptroller, Mayor's Office, and City Council identified four potential tracks for the program's future.

- (1) Keep the garbage program the same, add recycling, and continue to utilize the tax bill to pay for the tipping fee.
- (2) Begin a bag program, which would become a user fee, shifting the cost of disposal in a more equitable manner to all members of the community. This program would remove the tipping fee line from the tax bill.
- (3) Begin a sticker program, which would become a user fee, shifting the cost of disposal in a more equitable manner to all members of the community. This program would remove the tipping fee line from the tax bill.
- (4) Begin a pay per can agreement program, in which residents contract with the City for the number of cans they will put to the curb each week. Any additional collections will be assessed with a separate collection fee.

City Council and the Mayor agreed that the bag program would prove to be most effective and efficient, while still providing quality collection. The City chose a colored bag, which was designed on the 30:3 ratio. This ratio is established that the bag is non-transparent, but transparent at 3 feet. This ratio allows for privacy, but also allows for inspection.

The City then received \$100,000 in grant money from Broome County for the purchase of five (5) recycling trucks. This grant covered approximately 1/3 of the cost of the truck purchase.

It was announced at year's end, that one-fourth of the City, the First Ward/Downtown area, would participate in a recycling pilot program beginning January 1, 1991.

### **1990 Collection Program and Costs**

During 1990 the City collected twice per week for all properties, and provided five day a week collection downtown. All materials were landfilled, and no materials were recycled.

The City deposited 26,027 tons of waste at the landfill, at a \$35.00 per ton tipping fee. These figures equated to a tipping fee bill of \$910,945.

The Department of Public Works had the following staff of individuals, who were utilized for sanitation, road maintenance, street paving, snow removal and other DPW obligations.

2	Supervisors
1	Assistant Supervisor
1	Sr. Street Maintainer
6	Heavy Equipment Operators
29	Motor Equipment Operators
50	Street Maintainers

The City maintained a fleet of 12 garbage trucks, plus a transfer station, 3 transport trailers, and 4 supervisory vehicles.

## 1991

1991 was the year in which the City of Binghamton undertook large scale changes in their sanitation program. On January 1<sup>st</sup>, the First Ward and Downtown areas began recycling on a pilot basis, with plans for the whole City to participate on April 1.

On April 1 the City began recycling and the bag program full scale. Under the program, each property in the City would receive the collections per week: garbage (yellow bag), recycling, yardwaste, and trash (items which are too large or too heavy to into the yellow City bag). The “Tipping Fee” line was recovered from the tax bill.

All properties in the City received a yellow recycling bin and the appropriate information to participate in the program.

The income brought in from the sale of bags would pay for the tipping fee, the cost of a recycling and garbage inspection staff, and bag production. The City contracted with 40 vendors throughout the municipality who sell garbage bags in their stores. This equates to a revenue budget of \$1.2 million per year.

The initial recycling staff brought on-line included: the recycling coordinator/user fee manager, and four (4) inspectors.

### 1991 Collection Program and Costs

Beginning April 1, 1991, the City collected once per week, for the following items: garbage, recycling, yardwaste and trash.

Due to the fact that Broome County had not yet cited a recycling facility with enough capacity to handle the City’s waste stream, the City built and utilized a disposal site to accumulate recyclables in roll-offs.

The program provided instant results; by year’s end the City had deferred over 13,000 tons from the landfill (50.4%), and 37.0% of that material was recycled. These results pushed Binghamton above the goals established by the EPA and New York State.

Materials breakdown:

13,389 tons	landfilled
3,700 tons	recycled
4,000 tons	yardwaste (recycled)
180 tons	metal (recycled)

The total tipping fee cost, at \$35.00/ton, was \$510,790. This total is a baseline savings of nearly \$400,000.

The Department of Public Works had the following staff of individuals, who were utilized for sanitation, road maintenance, street paving, snow removal and other DPW obligations.

2	Supervisors
1	Assistant Supervisor
1	Sr. Street Maintainer
6	Heavy Equipment Operators
29	Motor Equipment Operators
50	Street Maintainers
1	Recycling Coordinator/User Fee Manager
2	Garbage/Recycling Inspectors

The City maintained a fleet of 12 garbage trucks, 5 recycling vehicles, a transfer station, 3 transport trailers, and 8 supervisory and inspection vehicles.

## 1992

In 1992 the City garbage bag and recycling program moved into its second year of operation. The source reduction and recycling successes seen in the first year of the program continued to grow.

With the completion of the Broome County Materials Recovery Facility (MRF), the City finally had a consistent outlet at which to dump their collected recyclables. In addition, this facility's location within the City limits provides our collection crews with a much more accessible outlet, thus speeding up collection.

The Department purchased one additional recycling vehicle out of capital funds.

Facing eminent budget cuts and layoffs, the Department realized that it could do the job with less field personnel. The collection department was trimmed of 1 supervisor, 3 drivers, and 6 laborers, while the recycling staff was trimmed of 2 inspectors. These cutbacks equated to substantial cost savings.

## **1992 Collection Program and Costs**

During 1992 the City collected once per week for the following items: garbage, recycling, yardwaste, and trash.

The City had a landfill deferment rate of 50.6% (from the 1989 baseline), and a recycling rate of 37.2%; continuing to meet EPA and New York State goals.

Materials breakdown:

13,687 tons landfilled  
3,934 tons recycled  
4,000 tons yard waste (recycled)  
157 tons metal (recycled)

The total tipping fee cost, at \$38.15/ton, was \$522,159.

The Department of Public Works had the following staff of individuals, who were utilized for sanitation, road maintenance, street paving, snow removal and other DPW obligations.

3 Supervisors  
1 Assistant Supervisor  
4 Heavy Equipment Operators  
27 Motor Equipment Operators  
46 Street Maintainers  
1 Recycling Coordinator/User Fee Manager  
2 Garbage/Recycling Inspectors

The City maintained a fleet of 12 garbage trucks, 6 recycling vehicles, a transfer station, 3 transport trailers, and 6 supervisory and inspection vehicles.

## **1993**

The success of the past two years continued to accumulate throughout 1993. The City's recycling rate increased once again to 39.6%.

This year also brought many new changes for the Sanitation Department's activities. First, due to new EPA regulations, the City now separates refrigerators and air conditioners from other white goods; these items are then purged of freon before salvage, to make them environmentally safe.

Other significant developments for the year include:

- (1) Computerization of the Recycling Department's complaint management, illegal dumping tracking, and billing.
- (2) Establishment of a "Needle Stick" policy, for instances when employees in the field come in contact with intravenous needles.
- (3) Manage PCB recycling/disposal for light fixture ballasts in City Hall energy efficiency program.
- (4) Aggressive pursuit of consistent garbage system abusers, through court appearances and small claims suits.
- (5) Increased work with Broome County Solid Waste and Cornell Cooperative Extension for new target areas for education.
- (6) The Recycling Department has provided assistance to the following communities: New York City; Wilkes-Barre, PA; Elmira, Watertown, Kingston, NY; Worcester, MA; San Jose, CA., and Troy.

The collection program for 1993 remained unchanged from the previous year. The total numbers for recycled material continued to be impressive.

Materials breakdown:

13,456 tons landfilled  
4,238 tons recycled  
4,200 tons yardwaste (recycled)  
250 tons metal (recycled)

The total tipping fee cost, at \$38.15/ton was \$540,220.

The Department of Public Works had the following staff of individuals who were utilized for sanitation, road maintenance, street paving, snow removal and other DPW obligations.

2 Supervisors  
1 Assistant Supervisor  
6 Heavy Equipment Operators  
27 Motor Equipment Operators (Drivers)  
46 Street Maintainers (Laborers)  
1 Recycling Coordinator/User Fee Manage  
3 Garbage/Recycling Inspectors

The City maintained a fleet of 12 garbage trucks, 6 recycling vehicles, a transfer station, 3 transport trailers, and 7 supervisory and inspection vehicles.

## **1994**

As Binghamton moved into its' fourth year of the user fee program, the tipping fee at the Broome County Landfill continued to rise. The rate went from \$38.15 per ton to \$50.10 per ton for MSW, while the C&D rate was set at \$60.10.

Faced with ever increasing costs, the City considered increasing the price of the garbage bags sold to residents in order to make up this difference. That idea was abandoned however, since the tipping fee could still be covered with our current bag revenue.

The recycling rate increased for the fourth year in a row to 41.5%.

### **1994 Collection Program and Costs**

During 1994, the City collected once per week for the following items: garbage, recycling, yardwaste, and trash.

Materials breakdown:

13,655 tons	landfilled
4,800 tons	recycled
4,400 tons	yardwaste (recycled)
500 tons	metal (recycled)

The total tipping fee cost, at \$50.10 per ton, was \$717,643.

The Department of Public Works had the following staff of individuals, who were utilized for sanitation, road maintenance, street paving, snow removal and other DPW obligations.

2	Supervisors
1	Assistant Supervisor
6	Heavy Equipment Operators
27	Motor Equipment Operators
46	Street Maintainers
1	Recycling Coordinator/User Fee Manager
3	Garbage/Recycling Inspectors

The City maintained a fleet of 12 garbage trucks, 6 recycling vehicles, a transfer station, 3 transport trailers, and 7 supervisory and inspection vehicles.

## 1995

In order to offset the tipping fee and avoid passing along added costs to residents, a total of seven positions were eliminated in the collection department. All of these vacancies were a result of attrition, therefore layoffs were not necessary. Most notable among these, was the elimination of the Recycling Coordinator/User Fee Manager. The responsibilities of this individual are being assumed by DPW Administration. It is a credit to the overall success of the user fee program that the Sanitation Department can continue to operate efficiently with significantly fewer personnel since the inception of the program.

In mid 1995, the City began to contract out for the service of purging freon from refrigeration units. By doing so, the clean units could then be sold for scrap metal with the City receiving revenue on a per ton basis. Prior to this arrangement, all refrigeration units were taken to the landfill and the City was charged \$60 per ton.

The contract arrangement between Binghamton and Hughes Organic (yardwaste disposal) proved beneficial in more ways than one. The City receives a discount on Hughes finished product and utilized this oxygen rich topsoil for some improvements on the municipal golf course.

The recycling rate improved once again to 42.2%.

### 1995 Collection Program and Costs

During 1995, the City collected once per week for the following items: garbage, recycling, yardwaste, and trash.

Materials breakdown:

13,492 tons	landfilled
5,000 tons	recycled
4,400 tons	yardwaste (recycled)
442 tons	metal (recycled)

The total tipping fee cost, at \$50.10 per ton, was \$713,491.41.

The Department of Public Works had the following staff of individuals, who were utilized for sanitation, road maintenance, street paving, snow removal and other DPW obligations.

- 3 Supervisors
- 3 Assistant Supervisors
- 5 Heavy Equipment Operators
- 27 Motor Equipment Operators
- 46 Street Maintainers
- 3 Garbage/Recycling Inspectors

The City maintained a fleet of 12 garbage trucks, 6 recycling vehicles, a transfer station, 3 transport trailers, and 7 supervisory and inspection vehicles.

### 1996

The County tipping fee was lowered to \$40 per ton for residential garbage in 1996. This alone would have resulted in significantly lower landfill costs. However, these savings were augmented by a change in our collection method which we implemented in September of 1996. Formerly, we collected garbage and yardwaste on the same day, with a trash pick up for large household items on a separate day of the week. By collecting garbage and yardwaste on the same day, we were forced to run the routes twice since we didn't have split hopper trucks.

We changed yardwaste to a separate collection day and included trash with everyone's regular garbage pick up. The routes are being run once and significant savings were realized through a reduced tip fee. Previously, *all* trash collected was being charged at the \$60 per ton C&D tip fee. Now, only true C&D is charged at that rate. The reduced tip fee combined with our collection change resulted in a \$97,521.64 savings.

Our yardwaste contract with Hughes Organic was about to expire, therefore we went out to bid early in 1996 and asked for a term of 5 years. Unexpectedly, we received a bid from another vendor and a proposal that will save the City \$100,000.00 over five years.

The recycling rate improved once again to 43.3%.

### 1996 Collection Program and Costs

During 1996, the City collected once per week for the following items: garbage MSW, recycling, yardwaste, and trash.

Materials breakdown:

- 13,338 tons landfilled
- 5,000 tons recycled
- 5,000 tons yardwaste (recycled)
- 206 tons metal (recycled)

The total tipping fee cost, at \$40 per ton MSW and \$60 per ton C&D, was \$615,969.77.

The Department of Public Works had the following staff of individuals, who were utilized for sanitation, road maintenance, street paving, snow removal and DPW tasks.

2	Supervisors
3	Assistant Supervisors
6	Heavy Equipment Operators
26	Motor Equipment Operators
41	Street Maintainers
2	Garbage/Recycling Inspectors

The City maintained a fleet of 12 garbage trucks, 6 recycling vehicles, a transfer station, 3 transport trailers, and 7 supervisory and inspection vehicles.

### **1997**

The County tipping fee once again remained at \$40 per ton for residential garbage and \$60 per ton for C&D in 1997. Our new collection schedule was also instrumental in reducing the overall tip fee. In the past two years, the tip fee has been reduced by over \$200,000.

We revised our routes at the beginning of the year by splitting the runs to eliminate heavy days versus light days. This has cut down on overtime and idle time making our operation more efficient.

The yardwaste contract with Bolands at \$70,000 per year runs through the year 2001. This arrangement has also saved the City money in tip fees. They accept any size logs, tree stumps, and other large yard waste items which previously were taken to the landfill and charged at the C&D rate of \$60 per ton.

The recycling rate improved once again to 43.6%.

### **1997 Collection Program and Costs**

During 1997, the City collected once per week for the following items: garbage MSW, recycling, yardwaste, and trash.

Materials breakdown:

12,785 tons	landfilled
4,675 tons	recycled
5,000 tons	yardwaste (recycled)
166 tons	metal (recycled)

The total tipping fee cost, at \$40 per ton MSW and \$60 per ton C&D, was \$511,965.70.

The Department of Public Works had the following staff of individuals, who were utilized for sanitation, road maintenance, street paving, snow removal and other DPW obligations.

2	Supervisors
3	Assistant Supervisors
6	Heavy Equipment Operators
26	Motor Equipment Operators
39	Street Maintainers
2	Garbage/Recycling Inspectors

The City maintained a fleet of 12 garbage trucks (1 new, 2 new bodies), 6 recycling vehicles, a transfer station, 3 transport trailers and tractors, and 7 supervisory vehicles.

### **1998**

The County tipping fee remained at \$40 per ton for residential garbage and \$60 per ton for C&D for the third straight year. Our new collection schedule continues to save money. As of December of 1998 we have saved over \$238,000 in tip fees.

Our metal collection operation has also been revised. We are removing the CFC from refrigeration units in house and taking the units next door to the scrap metal yard creating another source of revenue. Any of the precious metals such as brass and copper are removed initially and sold to a separate scrap dealer. We have more than doubled the City's scrap metal tonnage in the past year.

The overall recycling rate in 1998 was 44.2%.

### **1998 Collection Program and Costs**

During 1998, the City collected once per week for the following items: garbage MSW, recycling, yardwaste, and trash.

Materials breakdown:

13,050 tons	landfilled
4,747 tons	recycled
5,200 tons	yardwaste (recycled)
400 tons	metal (recycled)

The total tipping fee cost was \$524,668.38.

The Department of Public Works had the following staff of individuals, who were utilized for sanitation, road maintenance, street paving, snow removal and other DPW obligations.

2	Supervisors
3	Assistant Supervisors
4	Heavy Equipment Operators
25	Motor Equipment Operators
41	Street Maintainers
2	Garbage/Recycling Inspectors

The City maintained a fleet of 12 garbage trucks (1 new), 6 recycling vehicles, a transfer station, 3 transport trailers and tractors, and 7 supervisory and inspection vehicles (3 new).

### **1999**

The County tipping fee remained at \$40 per ton for residential garbage and \$60 per ton for C&D for the fourth straight year. Over the past 3 plus years, our new collection schedule has saved over \$330,000.00 in tip fees.

Our metal collection operation is also a huge success story. In a little over 2 years we have nearly tripled our tonnage and revenue.

The overall recycling rate decreased for the first time in eight years to 44.0%.

### **1999 Collection Program and Costs**

During 1999, the City collected once per week for the following items: garbage MSW, recycling, yardwaste, and trash.

Materials breakdown:

13,416 tons	landfilled
4,836 tons	recycled
5,200 tons	yardwaste (recycled)
447 tons	metal (recycled)

The total tipping fee cost was \$537,127.40.

The Department of Public Works had the following staff of individuals, who were utilized for sanitation, road maintenance, street paving, snow removal and other DPW obligations.

2	Supervisors
3	Assistant Supervisors
6	Heavy Equipment Operators
25	Motor Equipment Operators
40	Street Maintainers
2	Garbage/Recycling Inspectors

The City maintained a fleet of 12 garbage trucks, 6 recycle trucks (3 new), a transfer station, 3 transport trailers and tractors, and 7 supervisory and inspection vehicles.

## **2000**

The County tipping fee remained at \$40 per ton for residential garbage for the fifth straight year. However, the tipping fee for C&D was dropped from \$60 per ton to \$45 per ton. Over the past 4 years, our new collection schedule has saved over \$400,000.00 in tip fees.

During this past year, we also became involved in the dumpster business in an effort to generate additional revenue for the City. Our first account is the Binghamton City School District and we hope to expand this service in the future.

Our metal collection operation continues to be a huge success story. We have tripled our tonnage and revenue from previous years.

The overall recycling rate decreased slightly to 43.8%.

### **2000 Collection Program and Costs**

During the year 2000, the City collected once per week for the following items: garbage MSW, recycling, yardwaste, and trash.

Materials breakdown:

13,399 tons	landfilled
4,816 tons	recycled
5,200 tons	yardwaste (recycled)
440 tons	metal (recycled)

The total tipping fee cost was \$580,240.61.

The Department of Public Works had the following staff of individuals, who were utilized for sanitation, road maintenance, street paving, snow removal and other DPW obligations.

2	Supervisors
3	Assistant Supervisors
6	Heavy Equipment Operators
25	Motor Equipment Operators
40	Street Maintainers
2	Garbage/Recycling Inspectors

The City maintained a fleet of 11 garbage trucks, 6 recycling vehicles (3 new), a transfer station, 3 transport trailers and tractors, and 6 supervisory and inspection vehicles.

## 2001

The County tipping fee remained at \$40 per ton for residential garbage for the sixth straight year. However, due to an unusually mild October, November and December, we realized an increase in trash tonnage which pushed our landfill tonnage to its' highest level since 1990. The tonnage of our recycled materials was the highest in five years, but the increased landfill tonnage reduced our recycling rate to 42.9%.

Another major factor contributing to our increased landfill tonnage was our dumpster program. The City School District is the main account, however, they also generate significant revenue.

The overall recycling rate dropped by 2 percent to a very respectable 42.9%.

### **2001 Collection Program and Costs**

During the year 2001, the City collected once per week for the following items: garbage MSW, recycling, yardwaste, and trash.

Materials breakdown:

14,179 tons	landfilled
4,961 tons	recycled
5,200 tons	yardwaste (recycled)
479 tons	metal (recycled)

The total tipping fee cost was \$578,377.04

The Department of Public Works had the following staff of individuals, who were utilized for sanitation, road maintenance, street paving, snow removal and other DPW obligations.

2	Supervisors
3	Assistant Supervisors
6	Heavy Equipment Operators
25	Motor Equipment Operators
40	Street Maintainers
1	Garbage/Recycling Inspector

The City maintained a fleet of 12 garbage trucks, 6 recycling vehicles, a transfer station, 3 transport trailers and tractors, and 6 supervisory and inspection vehicles.

## **2002**

The County tipping fee remained at \$40 per ton for residential garbage for the seventh straight year. We reduced our landfill tonnage by over 500 ton due primarily to the diversion of our sweepings, by utilizing a screening plant, which dropped our landfilled material from sweepings by over 75%.

Broome County instituted a single stream recycling program, which eliminated residential sorting and sorting at curbside. In the long run, this should encourage an increase in recycling since residents no longer have to sort and separate recycled materials.

The overall recycling rate increased slightly to 43.2%

### **2002 Collection Program and Costs**

During the year 2002, the City collected once per week for the following items: garbage MSW, recycling, yardwaste, and trash.

Materials breakdown:

13,656 tons	landfilled
4,652 tons	recycled
5,200 tons	yardwaste (recycled)
543 tons	metal (recycled)

The total tipping fee cost was \$581,832.70

The Department of Public Works had the following staff of individuals, who were utilized for sanitation, road maintenance, street paving, snow removal and other DPW obligations.

2	Supervisors
3	Assistant Supervisors
6	Heavy Equipment Operators
25	Motor Equipment Operators
40	Street Maintainers
1	Garbage/Recycling Inspector

The City maintained a fleet of 12 garbage trucks, 6 recycling vehicles, a transfer station, 3 transport trailers and tractors and 6 supervisory and inspection vehicles.

### **2003**

The County tipping fee remained at \$40 per ton for residential garbage for the eighth straight year. Our landfilled tonnage increased by over 1,000 ton due primarily to a very active home remodeling effort by Binghamton residents, which resulted in significant construction and demolition debris.

We eliminated the position of Garbage/Recycling Inspector and turned over the responsibility of reporting violations to our drivers and supervisors. Since the inception of the City's recycling program in 1991, three (3) garbage/recycling inspectors and one (1) recycling coordinator position have been eliminated without negatively effecting our operation.

In the first full year since Broome County instituted a single stream recycling program, the rate fell to 40.3%. It is my belief that the new program confused many residents and this contributed to the lower numbers.

### **2003 Collection Program and Costs**

During the year 2003, the City collected once per week for the following items: garbage MSW, recycling, yardwaste, and trash.

Materials breakdown:

14,748 tons	landfilled
4,333 tons	recycled
5,200 tons	yardwaste (recycled)
433 tons	metal (recycled)

The total tipping fee cost was \$591,816.03

The Department of Public Works had the following staff of individuals, who were utilized for sanitation, road maintenance, street paving, snow removal and other DPW obligations.

2	Supervisors
3	Assistant Supervisors
5	Heavy Equipment Operators
25	Motor Equipment Operators
40	Street Maintainers

The City maintained a fleet of 12 garbage trucks, 6 recycling vehicles, a transfer station, 3 transport trailers and tractors and 5 supervisory vehicles.

## **2004**

The County tipping fee remained at \$40 per ton for residential garbage for the ninth straight year. Our landfilled tonnage remained virtually the same as did our recycling percentage.

The drivers and Supervisors took on the role of Garbage/Recycling Inspectors with great success. Since the inception of the User Fee Program, the City has eliminated three (3) garbage/recycling inspectors and one (1) recycling coordinator without negatively effecting our operation in any fashion.

In the second full year since Broome County instituted a single stream recycling program, our rate remained virtually the same at 40.2%.

### **2004 Collection Program and Costs**

During the year 2004, the City collected once per week for the following items: garbage MSW, recycling, yardwaste, and trash.

Materials breakdown:

14,755 tons	landfilled
4,293 tons	recycled
5,200 tons	yardwaste (recycled)
420 tons	metal (recycled)

The total tipping fee cost was \$590,216.40.

The Department of Public Works had the following staff of individuals, who were utilized for sanitation, road maintenance, street paving, snow removal and other DPW obligations.

2	Supervisors
3	Assistant Supervisors
5	Heavy Equipment Operators
25	Motor Equipment Operators
40	Street Maintainers

The City maintained a fleet of 11 garbage trucks, 6 recycling vehicles, a transfer station, 3 transport trailers and tractors and 5 supervisory vehicles.

## **2005**

The County tipping fee remained at \$40 per ton for residential garbage for the tenth straight year. Our landfilled tonnage was slightly reduced and our recycling percentage increased to 43.0%. This was mainly attributable to a significant increase in yard waste due to some severe storms in October.

The drivers and Supervisors continue in the role of Garbage/Recycling Inspectors with great success. We took delivery on three new garbage trucks and plan to purchase two more in the coming year.

In the third full year since Broome County instituted a single stream recycling program, our rate increased to 43.0%.

### **2005 Collection Program and Costs**

During the year 2005, the City collected once per week for the following items: garbage MSW, recycling, yardwaste, and trash.

Materials breakdown:

14,602 tons	landfilled
4,515 tons	recycled
5,200 tons	yardwaste (recycled)
373 tons	metal (recycled)

The total tipping fee cost was \$585,476.95.

The Department of Public Works had the following staff of individuals, who were utilized for sanitation, road maintenance, street paving, snow removal and other DPW obligations.

2	Supervisors
3	Assistant Supervisors
5	Heavy Equipment Operators
25	Motor Equipment Operators
40	Street Maintainers

The City maintained a fleet of 11 garbage trucks, 6 recycling vehicles, a transfer station, 3 transport trailers and tractors and 5 supervisory vehicles.

## 2006

The City of Binghamton experienced two major floods in 2006 that caused extensive damage to residents property and the City's infrastructure. As a result, our landfilled garbage increased to a 15 year high of 14,956 tons.

We recently took delivery on two new 25 yd. garbage trucks which will really shore up our fleet. Another one is being ordered for the coming year.

The City's recycling rate currently stands at 41.6%.

### 2006 Collection Program and Costs

During the year 2006, The City collected once per week for the following items: garbage MSW, recycling, yardwaste and trash.

#### Materials Breakdown:

14,956 tons	landfilled
4,441 tons	recycled
5,800 tons	yardwaste (recycled)
406 tons	metal (recycled)

The total tipping fee cost was \$601,017.50

The Department of Public works had the following staff of individuals, who were utilized for sanitation, road maintenance, street paving, snow removal and other DPW obligations.

2	Supervisors
3	Assistant Supervisors
5	Heavy Equipment Operators
25	Motor Equipment Operators
40	Street Maintainers

The City maintained a fleet of 10 garbage trucks, 6 recycling vehicles, a transfer station, 3 transport trailers, 2 tractors and 5 supervisory vehicles.

## **2007**

The City of Binghamton's Department of Public Works has continued to make repairs and improvements to the cities damaged infrastructure, caused by two major floods in 2006. We have budgeted to add one new 25 yd. garbage truck, one new tractor, and purchased a used Tractor to replace a tractor that was beyond cost effective repair.

The City's recycling rate currently stands at 40.8%.

### **2007 Collection Program and Costs**

During the year 2007, The City collected once per week for the following items: garbage MSW, recycling, yard waste, and trash.

#### **Materials Breakdown:**

15,052 tons	landfilled
4,315 tons	recycled
5,950 tons	yardwaste (recycled)
125 tons	metal (recycled)

**TOTAL: 25,443 Tons**

The tipping fee cost was \$602,079.

The Department of Public works had the following staff of individuals, who were utilized for sanitation, road maintenance, street paving, snow removal and other DPW obligations.

3	Supervisors
2	Assistant Supervisors
5	Heavy Equipment Operators
25	Motor Equipment Operators
40	Street Maintainers

The City maintained a fleet of **10** garbage trucks, **6** recycling trucks were used for **9** months, a transfer station, 3 transport trailers, **3** tractors and **5** supervisory vehicles.

In 2007 the company that receives our recycling (Waste Management) no longer required separation of the various material types. In response the Department of Public Works discontinued the use of recycling trucks (except in special circumstances). In September of 2007 the department began using garbage trucks to collect recyclable materials. The results have been, improved efficiency in collection and cost effective fleet usage.

**\*Note- The department does not mix recycling with garbage.**

### 2008

The City of Binghamton's Department of Public Works has continued to make repairs and improvements to the cities damaged infrastructure, caused by two major floods in 2006. In 2008 the City replaced two old Transfer Trailers with new ones.

The City's recycling rate currently stands at 41.2%.

### 2008 Collection Program and Costs

During the year 2008, The City collected once per week for the following items: garbage MSW, recycling, yard waste, and trash.

#### **Materials Breakdown:**

14,884 tons	land filled
4,585 tons	recycled
5,800 tons	yard waste (recycled)
75 tons	metal (recycled)

**TOTAL: 25,344 Tons**

The tipping fee paid to Broome County was \$595,358. The tipping fee associated with yard waste, was \$70,000, which was paid to Bolands.

The Department of Public works had the following staff of individuals, who were utilized for sanitation, road maintenance, street paving, snow removal and other DPW obligations.

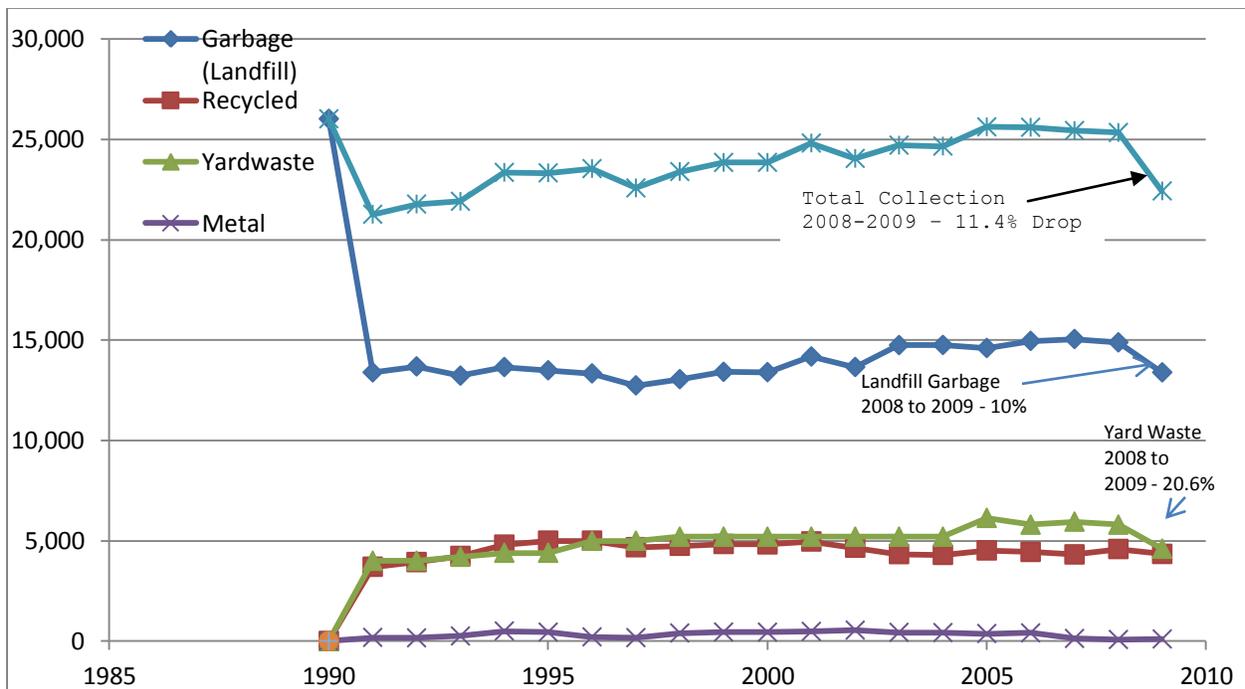
- 3 Supervisors
- 3 Assistant Supervisors
- 5 Heavy Equipment Operators
- 2 Transfer Station Operators
- 24 Motor Equipment Operators
- 38 Street Maintainers

The City maintained a fleet of **10** garbage trucks, a transfer station, 3 transport trailers, **3** tractors and **5** supervisory vehicles. After investigating the single stream recycling process implemented by Waste Management, the City is confident that we will not return to being required to separate the different types of recyclables in the future. That being said we will be selling off 4 of our 6 recycling vehicles and converting 2 into flatbeds that will be used to pick up appliances and metal recyclable material.

**\*Note- The department uses separate garbage trucks for recyclables and garbage.**

### 2009

For a decade from 1998 to 2008 the total volume and weight of all materials collected in the City of Binghamton remained nearly constant with mirror fluctuations of 1 or 2 percentage points across that time period. From 2005 to 2008 the total collection peaked within this period with totals over 25,000 tons per year. During 2009 we witnessed a measureable decline of all collection materials. MSW produced the largest decline (in tons), with yard waste producing the largest decline as a percentage of total materials collected.



While the total collection dropped by 11.4% and MSW dropped by 10%, the drop in recycling materials was significantly less at 5.3% from 2008 levels. The recycling ratio remains above 40% (40.3%). While recycling has declined from 2008 levels (4,585 Tons 2008 and 4,341 Ton 2009), material recycling not including yard waste and metal as a percentage of total MSW (landfill material) has increased slightly from 30.8% in 2008 to 32.4% in 2009.

The largest drop in 2009 as a percentage of the total collection was yard waste with a total of 1,200 ton reduction or a 20.6% from 2008 levels. **\*note** – yard waste data prior to 2010 is based on projections using historical data.

### **Material Breakdown**

Landfill	13,390 Tons
Recycling	4,341 Tons
Yard Waste (Recycled)	4,600 Tons
Metal (Recycled)	101 Tons
Total 2009	22,432.58 Tons

### **Deployment of Assets – Equipment**

- 12 Packers (Garbage Trucks 20 and 25 YD Capacity)  
Four of the 12 Packers used for recycling material pickup.  
Eight used for MSW.
- 2 Flatbed Trucks – Metal pickup
- 1 Flatbed Compartment Recycling Truck

### **Deployment of Assets – Labor**

- 3 Supervisors
- 3 Assistant Supervisors
- 4 Heavy Equipment Operators
- 2 Transfer Station Operators
- 24 Motor Equipment Operators
- 35 Street Maintainers

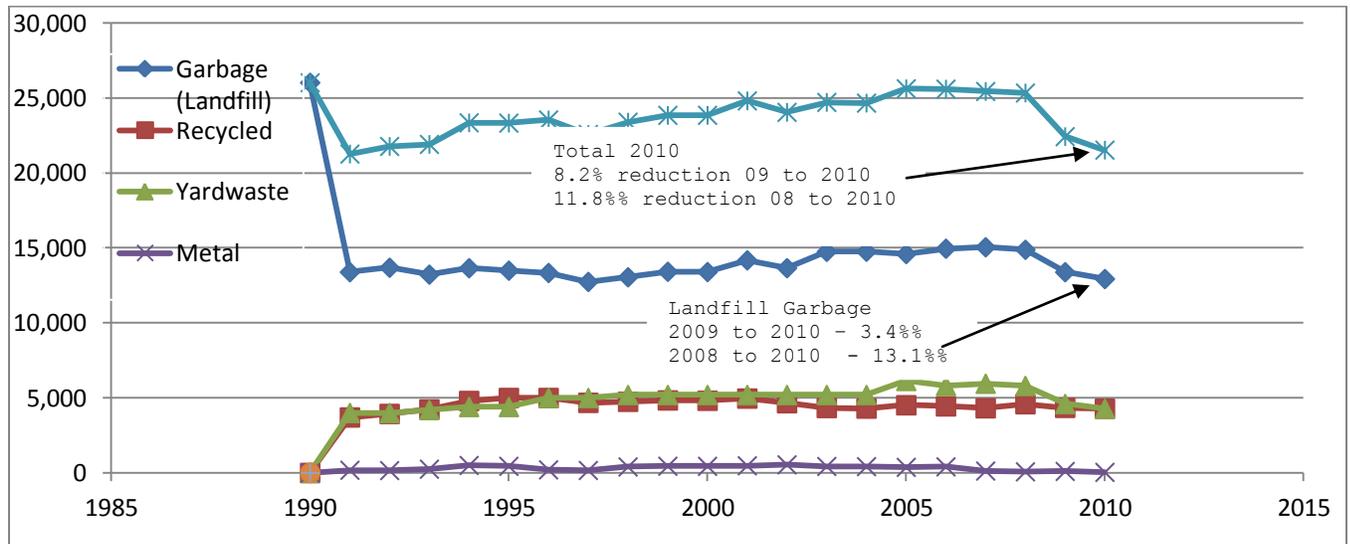
### **2009 Collection Program and Cost**

The collection cycle remained the same as 2008, one collection of MSW and recyclables per week. Yard waste was collected City wide once per week, March through November. Total tipping fees paid to Broome County for 2009 was \$535,621.60, a nearly 11% reduction from 2008 reflecting the 11% reduction in total material collection. Yard waste disposal cost paid to Boland remains at \$70,000.00 per year.

## 2010

The reduction in total collections that occurred in 2009 continued its trend through 2010. There was a reduction in total collections of nearly 8.2% from 2009 (22,432 Tons 2009 and 20,582 Tons 2010). Total MSW (landfill material) however declined by only 3.41% (13,390 Tons 2009 to 12,933 Tons 2010). All recyclable materials also declined 15.4% from 9,042 to 7,648 tons. The recycling ratio of all recyclable materials fell from 40% to 37.1%. However the net recycling of non- yard waste and metal materials as a percentage of total MSW (landfill materials) increased by nearly 1% from 2009, showing the continued growth and acceptance of recycling.

Metal pickup reached a 20 year low with a total of 39 tons for 2010. Much of this decline is likely related to the rise of the salvage value of scrap metal.



The total collection for 2010 represents the lowest level since 1990 based on available collection data. During 2010, procedures for the measuring of yard waste have been implemented and in part have influenced the percentage decline in the total collection data. The significant decline in metal collection during 2010 has also contributed to the overall decline in the total recyclables and in the overall total collection for the year.

### Material Breakdown

Landfill	12,933 Tons
Recycling	4,280 Tons
Yard Waste (Recycled)	3,329 Tons
Metal (Recycled)	39 Tons
<b>Total 2010</b>	<b>20,582 Ton</b>

### **Deployment of Assets – Equipment**

- 10 Packers (Garbage Trucks 20 and 25 YD Capacity)  
Four of the 12 Packers used for recycling material pickup.  
Eight used for MSW.
- 2 Flatbed Trucks – Metal-pickup
- 1 Flatbed Compartment Recycling Truck

### **Deployment of Assets – Labor Sanitation Only\***

- 1 Supervisors
- 2 Assistant Supervisors
- 13 Medium Equipment Operators
- 2 Transfer Station Operators
- 2 Sr. Street Maintainers
- 19 Street Maintainers

**\* Streets and Sanitation have been divided into two separate operational groups. The labor as list above reflects Sanitation only.**

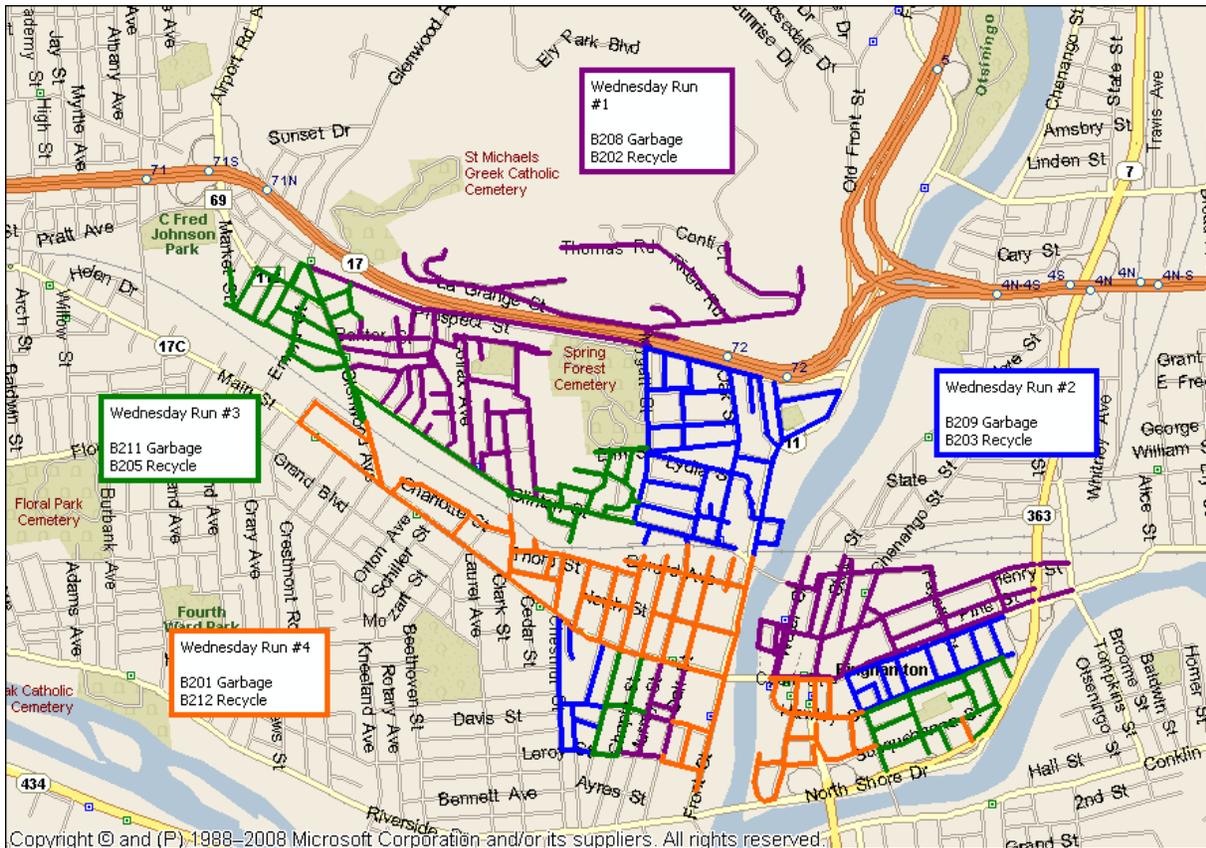
### **2010 Collection Program and Cost**

No change in the collection cycle from 2010 with one collection of MSW and recyclables. Yard waste was collected City wide once per week, March through November.

Total tipping fees paid to Broome County for 2010 was \$517,109.37 and yard waste disposal cost paid to Boland remains at \$70,000.00 per year.

### **2010 Developments and Future Planning**

In order to better understand and manage collection operations, the Department of Public Works has implemented methods to gather accurate and precise data used for measuring the volume and location of MSW and recyclables within the City of Binghamton. All collection materials including MSW, recycling, and yard waste can now be measured down to the individual truck routes. In effect, the DPW will develop a “sanitation profile” of the City. This data will provide greater insight regarding the distribution of material within the City and serve as the basis for routing optimization.



The data collected will also provide the necessary insight and serve as an information platform for future planning of operational adjustments. This data structure is also necessary for the implementation of our CMMS (computerized maintenance management system), using enterprise software from CarteGraph. Each individual truck and sanitation run will be “tracked” in CarteGraph in the form of a work order. The cost profile captured in CarteGraph in conjunction with the detailed data collection will provide the necessary management tools for controlling cost, improving operations and serve as the basis for future planning.

## 2011

With an 18% decrease in MSW that was transferred and hauled to the landfill along with an increase of 3% in curbside collection of recyclables and 6% increase in yard waste collected, our total MSW collection weight for 2011 has been reduced by 9%. The downward trend in the tonnage of garbage put out to curbside by residents and property owners continues in a direction that will allow us to meet our current goal of 50% MSW being recycled, by 2015. During 2011, procedures for the measuring of yard waste continued, showing a slight increase in the tonnage collected. The tonnage of metal items put to curbside for collection continues to decrease as the sale price for scrap metal remains high in comparison to historic averages.

### **Material Breakdown**

Landfill	10,735.41 Tons
Recycling	4,401.05 Tons
Yard Waste (Recycled)	3,537.42 Tons
Metal (Recycled)	29.62 Tons
<b>Total 2011</b>	<b>18,703.5 Tons</b>

### **Deployment of Assets – Equipment**

- 10 Packers (Garbage Trucks 20 and 25 YD Capacity)
- 4 of the 10 Packers used for recycling material pickup
- 3 of the 10 Packers are equipped with power winches on the back for emptying dumpsters
- 4 of the 10 Packers are used for MSW – with two used as back-ups
- 2 Tractors used for pulling Transfer Trailers
- 3 Transfer Trailers used to haul MSW to the Broome County Landfill and Yard Waste to Bolands for compost
- 2 Flatbed Trucks – Metal-pickup
- 1 Flatbed Compartment Recycling Truck
- 3 4X4 SUV Type Vehicles used by the supervisors

### **Deployment of Personnel – Labor Sanitation Only**

- 1 Supervisor
- 2 Assistant Supervisors
- 2 Transfer Station Operators
- 2 Sr. Street Maintainers
- 12 Motor Equipment Operators
- 22 Street Maintainers

**\* Streets and Sanitation have been divided into two separate operational groups. The labor as list above reflects Sanitation only.**

## **2011 Collection Program and Cost**

No change in the collection cycle from 2010 with one collection of MSW and recyclables per week. Yard waste was collected City wide once per week, March through November.

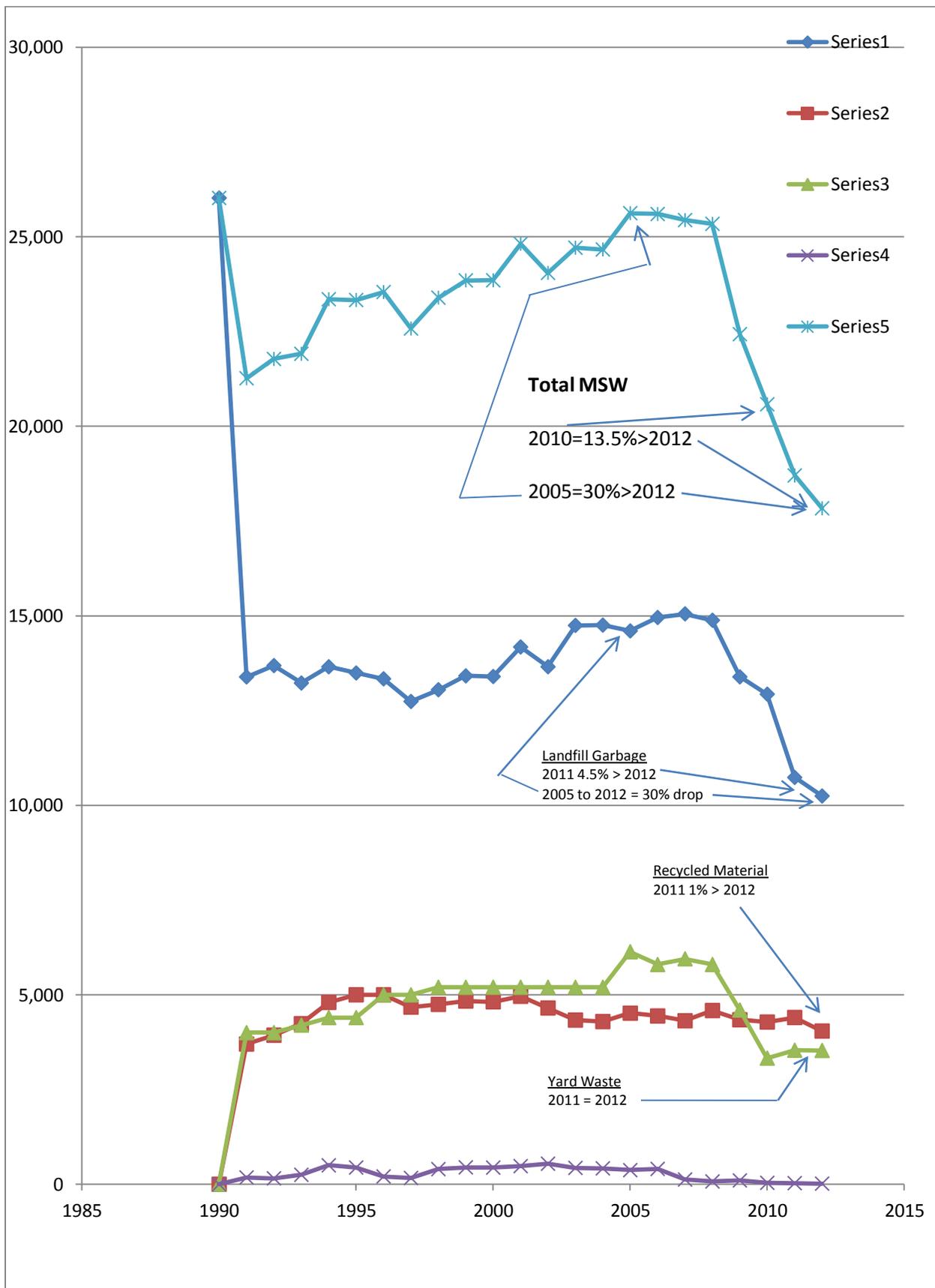
Total tipping fees paid to Broome County for 2011 was \$432,381.15 and yard waste disposal cost paid to Bolands was renegotiated and reduced from \$70,000 to \$63,000.00 per year. A savings of \$91,728.22 was realized in 2011 in comparison with the 2010 costs associated with tipping and disposal fees.

## **Tropical Storm Lee – FEMA Disaster Declaration 4031**

The city experienced the highest river levels on record during September of 2011. With those river levels came the most severe flooding in over 70 years. The crews from the sanitation division of public works were assisted by employees from several other divisions within the department. Special thanks to the men and women from streets, water, sewer, parks, central garage, and signs and signals.

Between September 10<sup>th</sup> and November 15<sup>th</sup>, the crews collecting flood debris picked at curbside, staged at Charles Street vacant site and Sandy Beach parking lot, and hauled > **7000 tons of debris** - to the Broome County landfill. The amount of flood debris collected represents an additional weight of more than 65% of our land filled MSW for 2011. Once again thanks to the blue collar employees, supervisors, and the administrative staff of the Department of Public Works for their outstanding level of service under difficult conditions and in several cases personal duress caused by flooding in their own homes.

**\*Note;** The regular MSW collection during this period of time reflects no deviation from the trend set throughout the year.



## 2012

With a 4.5% decrease in MSW (Municipal Solid Waste) that was transferred and hauled to the landfill along with an equivalent amount of curbside collection of recyclables and yard waste collected, our total MSW collection weight for 2012 has been reduced by 13.5% when compared to 2010. The continual downward trend in the amount of garbage put out to curbside by residents and property owners shows positive signs for a decrease in the need for landfill space for solid waste. During 2012, procedures for the measuring of yard waste continued, showing a relatively equal amount collected during 2011 and 2012. The tonnage of metal items put to curbside for collection continues to decrease as the sale price for scrap metal remains high in comparison to historic averages.

### Material Breakdown

Landfill	10,246.15 Tons
Recycling	4,043.64 Tons
Yard Waste (Recycled)	3,531.25 Tons
Metal (Recycled)	17.11 Tons
<b>Total 2012</b>	<b>17,838.15Tons</b>

### Deployment of Assets – Equipment

- 10 Packers (Garbage Trucks 20 and 25 YD Capacity)
- 4 of the 10 Packers used for recycling material pickup
- 3 of the 10 Packers are equipped with power winches on the back for emptying dumpsters
- 4 of the 10 Packers are used for MSW – with two used as back-ups
- 2 Tractors used for pulling Transfer Trailers
- 3 Transfer Trailers used to haul MSW to the Broome County Landfill and Yard Waste to Bolands for compost
- 2 Flatbed Trucks – Metal-pickup
- 1 Flatbed Compartment Recycling Truck- used as back-up
- 3 4X4 SUV Type Vehicles used by the supervisors

### Deployment of Personnel – Labor Sanitation Only

- 1 Supervisor
- 2 Assistant Supervisors
- 2 Transfer Station Operators
- 2 Sr. Street Maintainers
- 12 Motor Equipment Operators
- 22 Street Maintainers

## **2012 Collection Program and Cost**

No change in the collection cycle from 2011 with one collection of MSW and recyclables per week. Yard waste was collected City wide once per week, March through November. Christmas tree collection is in effect on Mondays during January.

Total tipping fees paid to Broome County for 2012 was \$409,846 and yard waste disposal cost paid to Bolands was \$63,000.00. A savings of \$211,176 has been realized for (2011 and 2012 combined) when compared with the 2010 costs associated with tipping and disposal fees.

## **IN CONCLUSION**

Through implementation of the sticker requirement (as recommended by the Sanitation Commission) we continue to protect the environment and reduce costs. Our goal to protect the environment in a cost effective manner remains the same and our methods continue to improve. We continue to update our fleet, having replaced 7 Packer Trucks and 2 Tractors since 2006, with an additional Packer being delivered next month. During 2013 we will be analyzing the data collected over the last 2 years at our transfer station to look for ways to reduce fuel consumption and identify areas where public education will increase the volume of recyclable material collection.

The Sanitation Division of the Department of Public Works remains committed to provide the City of Binghamton's residents and property owners with outstanding service at a competitive price.

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